

Cisco Mobility Services Engine Virtual Appliance Installation Guide for Cisco CMX Release 10.4

First Published: 2017-04-02 **Last Modified:** 2017-06-27

Americas Headquarters

Cisco Systems, Inc. 170 West Tasman Drive San Jose, CA 95134-1706 USA http://www.cisco.com Tel: 408 526-4000 800 553-NETS (6387) Fax: 408 527-0883 THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB's public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED "AS IS" WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: http:// WWW.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

© 2017 Cisco Systems, Inc. All rights reserved.



CONTENTS

Γ

CHAPTER 1	Installing Cisco MSE in a VMware Virtual Machine 1
	Virtualization Concepts 2
	Installation Overview 2
	Restrictions for Installing Cisco MSE in a VMware Virtual Machine 3
	Cisco MSE Virtual Appliance Deployment Checklist 3
	Prerequisites for Installing Cisco MSE in a VMware Virtual Machine 3
	Hardware Guidelines 4
	Release Upgrade Compatibility Matrix 4
	VM Alerts 6
	Downloading the Cisco MSE OVA File 7
	Deploying the Cisco MSE OVA File Using the VMware vSphere Client 8
	Installing a Cisco MSE Virtual Appliance 19
	Creating New Virtual Machines Using Hyper-V Manager 26
	Installing Cisco CMX Using Web Interface 27
	Upgrading from Cisco CMX 10.x to 10.4 30
	Verifying Installing Cisco MSE in a VMware Virtual Machine 31
CHAPTER 2	Virtual Machine Setup and Administration 33
	Adding a Hard Disk to a Virtual Machine in the vSphere Client 33
	Configuring the Network 33
	Reconfiguring CPU and RAM for Cisco CMX installation 34
CHAPTER 3	Uploading the Cisco CMX/MSE ISO Image to the Cisco MSE 3365 35
	Uploading the Cisco CMX/MSE ISO Image to the Cisco MSE 3365 Using Newer CIMC Versions 35
	Uploading the Cisco CMX/MSE ISO Image to the Cisco MSE 3365 Using Older CIMC Versions 43

I

٦



CHAPTER

Installing Cisco MSE in a VMware Virtual Machine

This chapter describes how to install and deploy a Cisco Mobility Services Engine (MSE) virtual appliance.

Cisco MSE is a prebuilt software solution that comprises one or more virtual machines (VMs) that are packaged, maintained, updated, and managed as a single unit. Cisco MSE is distributed as an Open Virtual Appliance (OVA) for installation on a virtual appliance and as an ISO image for installation on a physical appliance.

Cisco MSE acts as a platform (physical or virtual Cisco Mobility Services Engine [MSE] appliance) to deploy and run the Cisco services.

If you choose Location during installation, you will see the following services in Cisco CMX GUI.

- DETECT & LOCATE—Active for 120 day trial period unless either a CMX base or advanced license is added.
- ANALYTICS—Active for 120 day trial period unless a CMX advanced license is added.

If you choose Presence during installation, you will see the following services in the Cisco CMX GUI.

- CONNECT—Active for 120 day trial period unless either a CMX base license is added.
- PRESENCE ANALYTICS
- Virtualization Concepts, page 2
- Installation Overview, page 2
- Restrictions for Installing Cisco MSE in a VMware Virtual Machine, page 3
- Cisco MSE Virtual Appliance Deployment Checklist, page 3
- Prerequisites for Installing Cisco MSE in a VMware Virtual Machine, page 3
- Hardware Guidelines, page 4
- Release Upgrade Compatibility Matrix, page 4
- VM Alerts, page 6
- Downloading the Cisco MSE OVA File, page 7

- Deploying the Cisco MSE OVA File Using the VMware vSphere Client, page 8
- Installing a Cisco MSE Virtual Appliance, page 19
- Creating New Virtual Machines Using Hyper-V Manager, page 26
- Installing Cisco CMX Using Web Interface, page 27
- Upgrading from Cisco CMX 10.x to 10.4, page 30
- Verifying Installing Cisco MSE in a VMware Virtual Machine, page 31

Virtualization Concepts

Refer to these documents for information on virtualization:

- Virtualization Overview
- Setting Up ESXi
- Virtualization Basics

Installation Overview

The following table lists the Cisco MSE virtual appliance installation process and contains information about the sections providing details about them:

Step	Task	See
1	Review the deployment checklist and prepare for the installation of a Cisco MSE virtual appliance.	Cisco MSE Virtual Appliance Deployment Checklist, on page 3 and Hardware Guidelines, on page 4
2	Download the Cisco MSE Open Virtualization Archive (OVA) file from Cisco.com.	Downloading the Cisco MSE OVA File, on page 7
3	Deploy the Cisco MSE OVA file.	Deploying the Cisco MSE OVA File Using the VMware vSphere Client, on page 8
4	Configure the basic configurations and install the Cisco MSE virtual appliance.	Installing a Cisco MSE Virtual Appliance, on page 19
5	Set up the Cisco MSE virtual appliance.	Installing Cisco CMX Using Web Interface, on page 27

Table 1: Installation Overview

Restrictions for Installing Cisco MSE in a VMware Virtual Machine

- Map size must be less than 5 MB in Cisco Prime Infrastructure.
- There must be less than 1000 access points on a single map.
- The Mobile Application Server and Wireless intrusion prevention system (wIPS) are not available.
- A common NTP server must be used to synchronize the time.
- Simple Mail Transfer Protocol (SMTP) Mail Server name and authentication mechanism must be used for the Cisco CMX mail notification system.
- Cisco CMX 10.2 does not render any data on Cisco Prime Infrastructure maps. To allow client display in Cisco Prime Infrastructure 1.4 or later, a parallel Cisco MSE 8.0 is also required.

Cisco MSE Virtual Appliance Deployment Checklist

- · Cisco Wireless Controller has IP connectivity to a Cisco CMX instance.
- Cisco Prime Infrastructure has IP connectivity to a Cisco CMX instance.
- Port 16113 is routable from Cisco WLC to the Cisco CMX IP address.
- Port 161 (for Simple Network Management Protocol [SNMP] traffic) is routable from Cisco WLC to the Cisco CMX IP address.
- SSH client to log in with the root access to the VM is present.
- A Secure Copy (SCP) client (on MAC native or installed on PC) or a Secure File Transfer Protocol (SFTP) exists to move files into Cisco CMX OVA (specifically, map files and images to upgrade).

Prerequisites for Installing Cisco MSE in a VMware Virtual Machine

- VMWare vSphere client.
- Hostname IP address, netmask, default gateway, DNS IP address, and Network Time Protocol (NTP) Server IP address or name.
- Cisco WLC 7.6, 8.0 or later.
- IP address, type, the SNMP version, and the SNMP write community string of Cisco WLC.
- SNMP credentials of Cisco WLC (private key for V1 and V2, or username and password for V3).
- Mail server settings (port number and security settings) and email address.
- Cisco Prime Infrastructure 2.2, 3.0, or later with a hierarchy of maps in the order of campus, building, and floor.

- Existing exported map file from Cisco Prime Infrastructure.
- VMware virtualization environment ESXi 5.x, 6.0, and 6.5.

Hardware Guidelines

The following table lists the hardware guidelines for the Cisco MSE virtual appliance.



If the hardware requirements are not met, the OVA deployment fails. Similarly, the Cisco MSE setup fails during installation when the other minimum requirements listed in the table below are not met.

Table 2: Hardware Guidelines

Hardware Platform Basic Appliance		Standard Appliance	High-End Appliance	
СРИ	8 vCPU (2.4 GHz core)	16 vCPU (2.4 GHz core)	24 vCPU (2.4 GHz core)	
RAM	24 GB	48 GB	64 GB ¹	
HDD	500 GB	500 GB	1 TB	

¹ The high-end deployment VM (20 vCPU, 64 GB RAM) reserves 63.74 GB for itself and the rest of the RAM is used by ESXi.



We recommend you to allocate the required HDD space. For more information, see step 12 in Deploying the Cisco MSE OVA File Using the VMware vSphere Client section.

Release Upgrade Compatibility Matrix

The following table lists the Cisco CMX releases available on Cisco.com.

Table 3: Cisco CMX Releases Available on Cisco.com

Cisco CMX Release	OVA	3365 ISO	Upgrade Option Only
10.1.0	cmx-v10-1-0.ova	—	—
10.1.1		10.1.1	—
10.1.1-2	-	_	cisco_cmx-10.1.1-2.tar.gz (cisco_cmx-10.1.1-2x86_64.pm and cisco_cmx_comat+101.1-20x86_64.pm)

I

ſ

Cisco CMX Release	OVA	3365 ISO	Upgrade Option Only	
10.1.2	—	—	cisco_cmx-10.1.1-2.tar.gz	
10.2	10.2 OVA	10.2 ISO	10.2 backend upgrade (10.1 and 10.1.1 to 10.2) script and.CMX image file	
10.3	10.3 OVA	10.3 ISO	-	
10.4	10.4 OVA	10.4 ISO	—	

Table 4: Node Types Supported Per Release

Release	Location and Analytics Node	Location and Connect Node	Location, Analytics, and Connect Node (L-Node)	Connect and Presence Node (P-Node)
10.1.0	Yes	—	—	—
10.1.1-2	Yes	Yes	Yes	—
10.1.2	Yes	Yes	Yes	_
10.2	Use the upgrade script to change Location and Analytics to Location, Analytics, and Connect internally.	Use the upgrade script to change Location and Connect to Location, Analytics, and Connect internally.	Yes	Yes
10.3	Use the upgrade script to change Location and Analytics to Location, Analytics, and Connect internally.	Use the upgrade script to change Location and Connect to Location, Analytics, and Connect internally.	Yes	Yes
10.4ß	Use the upgrade script to change Location and Analytics to Location, Analytics, and Connect internally.	Use the upgrade script to change Location and Connect to Location, Analytics, and Connect internally.	Yes	Yes

1

Upgrade Path 1 ²	Location and Connect Node	Location and Analytics Node	Location, Analytics, and Connect Node (L-Node)	Connect and Presence Node (P-Node)
10.1.0 OVA to 10.2	10.2 backend script to upgrade image to10.2 and change Location and Connect to Location, Connect, and Analytics.	10.2 backend script to upgrade image to10.2 and change Location and Analytics to Location, Connect, and Analytics.	10.2 backend script to upgrade image to 10.2.	
10.1.1-2 tar.gz to 10.2	10.2 backend script to upgrade image to 10.2 and change Location and Connect to Location, Connect, and Analytics.	10.2 backend script to upgrade image to 10.2 and change Location and Analytics to Location, Connect, and Analytics.	10.2 backend script to upgrade image to 10.2.	
10.1.2 tar.gz to 10.2	10.2 backend script to upgrade image to 10.2 and change Location and Connect to Location, Connect, and Analytics.	10.2 backend script to upgrade image to 10.2 and change Location and Analytics to Location, Connect, and Analytics.	10.2 backend script to upgrade image to 10.2.	
10.2 OVA/ISO to 10.3			UI upgrade script to upgrade image.	UI upgrade script to upgrade image
10.3 OVA/ISO to 10.4	—	—	UI upgrade script to upgrade image.	UI upgrade script to upgrade image

Table 5: Upgrade Path by Node Type

 2 $\,$ The path that is provided for upgrade is the same as that used for backup and restore.

VM Alerts

The following table displays the alerts shown on the VM for the following conditions:

Table 6: VM Alerts

Hard Disk Status	Alert Shown	
50 percent	Do Not Back Up	
80 percent	System Is About To Run Out Of Space	

I

Hard Disk Status	Alert Shown	
85 percent	All The Services Are Stopped	

Downloading the Cisco MSE OVA File

Step 1	Download the Cisco MSE image from Download Software on cisco.com.
Step 2	Save the Cisco MSE OVA installer to your computer and ensure that it is accessible.

Deploying the Cisco MSE OVA File Using the VMware vSphere Client

To deploy the Cisco MSE OVA file using the VMware VSphere Client, follow these steps:

- **Step 1** Launch the VMware vSphere client application on your desktop.
- **Step 2** From the VMware vSphere Client application menu, choose **File** > **Deploy OVF Template**.
- **Step 3** In the **Deploy OVF Template** window that is displayed, click **Browse** and select the Cisco MSE OVA file that is stored locally on the machine.

Figure 1: Select CMX Image

Deploy OVF Template	
Source Select the source location.	
Source OVF Template Details End User License Agreement Name and Location	
Deployment Configuration Disk Format Network Mapping	Deploy from a file or URL C:\Users\rajbanga\Downloads\CISCO_CMX-10.2.0-213.ova Browse
Ready to Complete	Enter a URL to download and install the OVF package from the Internet, or specify a location accessible from your computer, such as a local hard drive, a network share, or a CD/DVD drive.
Help	< Back Next > Cancel

Step 4 Verify the **OVF Template Details** details, and click **Next**.

Figure 2: OVF Template Details

I

Deploy OVF Template				
OVF Template Details Verify OVF template details.				
Source OVF Template Details End User License Agreement Name and Location Deployment Configuration Resource Pool Disk Format Ready to Complete	Product: Version: Vendor: Publisher:	cisco-cmx No certificate present		
	Download size: Size on disk:	5.4 GB 5.4 GB (thin provisioned) 50.0 GB (thick provisioned)		
	Description:			
Нер			< Back Next >	Cancel

1

Step 5 Click Accept to accept the End User License Agreement and then click Next.

Figure 3: End User License Agreement

🛃 Deploy OVF Template		_ 🗆 ×
End User License Agreement Accept the end user license agr	eements.	
Source OVF Template Details End User License Agreema Name and Location Deployment Configuration Host / Cluster Resource Pool Disk Format Ready to Complete	We will reserve part of the resources of CPU and memory based on your OVA selection. 	×
	Accept	¥
Help	< Back Next >	Cancel

Step 6 Enter a name for the Cisco MSE VM and click **Next**.

Figure 4: Name and Location

I

10.104.177.82 - vSphere Client		A1000 0 0 0 0 0 0	
File Edit View Inventory Administration Plug	i-ins Help		
Home > 👌 Inventory > 🕅			
8 e	Ø Deploy OVF Template		
Control C	Rame and Location Specify a name and location OVE. Terminate Details Over Literate Details Over Literate Answerment Hame and Location Desk Format Nethorsk Mapping Ready to Comfete a	n for the deployed template Name:	appet or Status contains: - Clear X
Name Target			
			2 2
			cel Evaluation Mode 28 days remaining _root _
Tasks		<back next=""> Carx</back>	eel Evaluation Mode: 28 days remaining root /

Step 7 From the Configuration drop-down list, choose the VM configuration of your choice. The available options are Low-end, Standard, High-end.

Figure 5: Deployment Configuration

Deploy OVF Template		
Deployment Configuration Select a deployment configura	ation.	
Source OVF Template Details End User License Agreement Name and Location Deployment Configuration Disk Format Network Mapping Ready to Complete	Configuration: Two-end The resources consumed by this configuration are: 8 vCPUs. 8000 Mhz will be reserved. 24GB Memory. 24GB will be reserved.	
Help	< Back Next >	Cancel

Step 8 Check the format in which you want to store the virtual disk.

Figure 6: Format

I

Deploy OVF Template			
Disk Format In which format do you war	nt to store the virtual disks?		
Source OVF Template Details End User License Agreement Name and Location Deployment Configuration Resource Pool Disk Format Ready to Complete	Datastore: Available space (GB): Thick Provision Lazy Z Thick Provision Eager Thin Provision		
Help		< Back Next	> Cancel

Step 9 Map the networks used in the OVF template to the networks in your directory.

Note With CSCve21967, you cannot deploy the Cisco MSE OVA file with standard and high end VM types with the VMWare ESXi 6.x web client. The web client interface does not show the inventory items drop-down options (low end, standard, and so on) and the option to select VM type is not enabled on the Deployment Options window. However, you can use the VMWare vSphere desktop client from ESXI 5.x to successfully deploy standard and high end VM types to an ESXI 6.x. For more information, see

 $https://kb.vmware.com/selfservice/microsites/search.do?language=en_US\&cmd=displayKC\&externalId=2121185.$

1

Figure 7: Network Mapping

Network Mapping What networks should the o	deployed template use?		
Source OVF Template Details End User License Agreement	Map the networks used in this OVF te	mplate to networks in your inventory	
Name and Location	Source Networks	DestinationNetworks	
Deployment Configuration Disk Format Network Mapping Ready to Complete	NAT	VM Network	
	Construction:		
	Logical network used by this appliance	e,	

Step 10 Click Finish. Ensure that Power On the Virtual Machine is not checked.

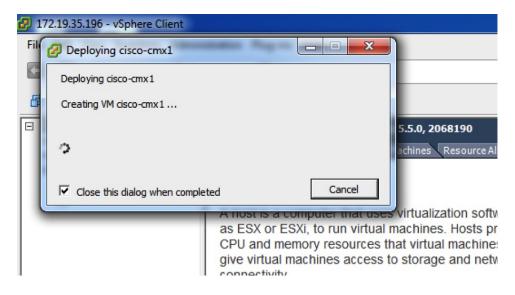
Figure 8: Complete the Deployment

I

Source OVF Template Details End User License Agreement	When you click Finish, the deploym Deployment settings:	ent task will be started.
Name.and.Location Deployment Configuration Resource Pool Disk.Format Ready to Complete	OVF file: Download size: Size on disk: Name: Deployment Configuration: Host/Cluster: Datastore: Disk provisioning: Network Mapping:	http://172.19.35.162:8080/view/CMX-Release/job/CMX-O 5.4 GB 50.0 GB cisco-cmd. Standard localhost. datastore1 Thick Provision Lazy Zeroed "NAT" to "VM Network"
	Power on after deployment	

Wait for the deployment to complete. This will take a few minutes.

Figure 9: Deploying the OVA



Step 11 Click the deployed VM and choose **Edit Virtual Machine**.

Figure 10: Edit Virtual Machine

	What is a Virtual Machine?
	A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. An operating system installed on a virtumachine is called a guest operating system.
	Because every virtual machine is an isolated comput environment, you can use virtual machines as deskto workstation environments, as testing environments, o consolidate server applications.
	Virtual machines run on hosts. The same host can rumany virtual machines.
	Basic Tasks
	Power on the virtual machine
	Edit virtual machine settings

Step 12 (Optional) Click Hard disk and modify the Provisioned Size as per your requirement and capacity.

Figure 11: Edit Provisioned Size

I

Image: Solution of the solution	🚱 cisco-cmx - Virtual Machine Pro	operties	
Show All Devices Add Remove Hardware Summary Memory 24568 MB CPUs 8 Video card Video card VMCI device Restricted SCSI controller 0 LSI Logic Parallel Hard disk 1 (edited) Virtual Disk Vertual Device Node SCSI (0:0) Hard disk 1 Mode Independent Independent Independent disks are not affected by snapshots.	Hardware Options Resources		Virtual Machine Version: 7
Image: Memory 24568 MB Image: CPUs 8 Image: Video card Video card Image: Video card Video card Image: VMCI device Restricted Image: SCSI controller 0 LSI Logic Parallel Image: Network adapter 1 VM Network Image: Network adapter 1 VM Network Image: Network adapter 1 VM Network	Show All Devices	Add Remove	
	Memory CPUs Video card VMCI device SCSI controller 0 Hard disk 1 (edited)	24568 MB 8 Video card Restricted LSI Logic Parallel Virtual Disk	Type: Thick Provision Lazy Zeroed Provisioned Size: 250 - GB • Maximum Size (GB): 1419.37 Virtual Device Node SCSI (0:0) Hard disk 1 SCSI (0:0) Hard disk 1 • Mode Independent Independent Independent disks are not affected by snapshots. C Persistent Changes are immediately and permanently written to the disk. C Nonpersistent Changes to this disk are discarded when you power
Help OK Cancel	Help		OK Cancel

1

Step 13 (Optional) Click **Resources>CPU** and modify the reservations if your OVA fails to start because of insufficient resources.

💋 cisco-cmx - Virtual Machine Pr	roperties			- • ×
Hardware Options Resources			Virtua	al Machine Version: 7
Settings	Summary	Resource Allocat	ion	
CPU	12000 MHz	Shares:	Normal 👻	8000 ÷
Memory	24567 MB	Shares.		
Disk Advanced CPU	Normal HT Sharing: Any	Reservation:		12000 🛨 MHz
Advanced Memory	NUMA Nodes: 2		▲	
		Limit:	1 [18392 - MHz
			Unlimited	
			14. Charace	
			parent resource pool or currer	that
		A Linit Dased on	parent resource poor or curren	LINOSL
Help			OK	Cancel
			- OK	
				///

Figure 12: Modify CPU Reservations

Step 14 Power ON the VM. The first boot takes a while as the new disk has to be expanded.

File Edit View Inventory Administration Plug-ins Help Inventory Þ Inventory 0 Home G 1 13 00 Ch 1 100 172.19.35.196 8 🗐 cisco-cmx Alpha Servers Ŧ Getting Started source Allocat Θ Anurag Test ÷ Build Servers Ŧ Cisco-Power ٠ Ctrl+B Power On Guest ٠ Power Off Ctrl+E Snapshot ٠ Suspend Ctrl+Z 2 **Open Console** Reset Ctrl+T 5 Edit Settings... Shut Down Guest Ctrl+D Upgrade Virtual Hardware **Restart Guest** Ctrl+R Add Permission... Ctrl+P nts, as testing environments, or to plications. Report Performance... n hosts. The same host can run Rename Open in New Window... Ctrl+Alt+N Remove from Inventory **Delete from Disk** Power on the virtual machine Edit virtual machine settings

Figure 13: Power ON VM

Installing a Cisco MSE Virtual Appliance

After the Cisco MSE is deployed, you can install and configure a Cisco MSE virtual appliance. Note the following points:

- Cisco MSE does not have a node install menu. However, there is a first-boot script that checks if a configuration exists on the device. If the script does not find a valid configuration, it launches the setup routine and initiates network configuration tasks using the CLI, followed by initial setup tasks on the browser.
- The new first-boot script determines if the initial configuration is completed, and then displays the normal login prompt. If the initial configuration is not completed, the default login prompt is displayed.



The **cmxctl node install** command is no longer valid.

To install and configure a Cisco MSE virtual appliance, follow these steps:

Step 1Right-click the Cisco MSE VM and click Open Console.
The console window is displayed with the following information:

CentOS release 6.6 (Final) Kernal 2.6.32-504.el6.x86_64 on an x86_64 localhost login: cmxadmin password: cisco Last login: Sun May 15 19:31:03 from 10.0.2.2

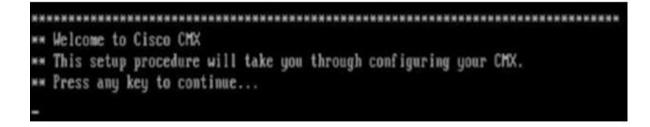
Step 2 Enter the login name and password as prompted.

Figure 14: Console Window



Step 3 Press **Enter** when prompted, as shown in the figure below.

Figure 15: Press Enter



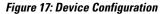
Step 4 Enter a new password for the root user and reconfirm it when prompted. The password should meet the minimum requirements listed.

- **Note** The root password is used only for root operating system configuration and not for the cmxadmin user functions.
- Step 5 Enter a new password for cmxadmin user and reconfirm it. The password should meet the minimum requirements listed.Note The cmxadmin password is used for logging in to the Cisco MSE account for future network admin configurations.

Figure 16: Set Passwords



Step 6 In the **Select Action** window, click **Device configuration**.





I

Step 7 In the Select A Device window, click the eth0 interface.

Figure 18: Select A Device

	Select A Device Select A Devic
	(Hew Device)
<tab>z<01t-Ta</tab>	b> between elements : <space> selects : <f12> next screen</f12></space>

- **Note** With CSCux07068, CMX 10.2 and 10.2.1 installation fails when **New Device** option is selected under device configuration. We recommend that you do not select **New Device** option.
- **Step 8** In the Network Configuration window, toggle the Use DHCP field and then enter the Static IP address, Netmask, and Default gateway IP, and click Ok.

Note
 To set the hostname, see the Hostname field in Step 10. Changing the hostname through the CLI is not supported. After the initial setup, to change the hostname, use the cmxos reconfigure command to display the Network Configuration and DNS Configuration windows again.

- Do not change the Device field as this is automatically detected.
- Do not enter DNS details because the information entered here is not used by the system. These details can be entered in the DNS configuration step (Step 10) that follows.

Figure 19: Network Configuration

Network C	onfiguration
Name Device Use DHCP Static IP Netmask Default gateway IP Primary DNS Server Secondary DNS Serve	eth0 th0 1 1 172.19.25.125 255.255.254.0 172.19.24.1 r Cancel
<tab>/<alt-tab> between elements </alt-tab></tab>	<pre><space> selects <f12> next screen</f12></space></pre>

Note Do not change the name of the interface. The default interface **Name** is eth0 and it should not be changed.

Step 9 In the **Select Action** window, click **DNS Configuration**.



	Select Action	
	aveðQuit Quit	
(Tab)/(All-Tab) between eiem	ients I (Space) selects	∣ <f12> mext screen</f12>

Step 10 In the DNS configuration window, enter the Hostname, DNS, and DNS search path default domain.

Figure 21: DNS Configuration

1	DNS conf	iguration	1	
	Hostname Primary DHS Secondary DHS Tertiary DHS DHS search path	st.localdomain_ 171.78.168.183_ cisco.com		
	Ok	Cancel		
(Tab)/(Alt-Tab) betwe	en elements	<pre> selects</pre>		(F12) next screen

Step 11 In the Select Action window, click Save&Quit.

Figure 22: Select Action

Note

Select Action Device configuration DMS configuration	
SaveAQuit Quit	
(Tab>/(Alt-Tab> between elements (Space) selects	<f12> next screen</f12>

Step 12 (Recommended) Enter the NTP server name or the IP address of the NTP server when prompted.

 After installation, changing the NTP information through the CLI or GUI is not supported. To change the NTP information, use the **cmxos reconfigure** command from the CMX CLI to to change the NTP information. Given below is a workaround.

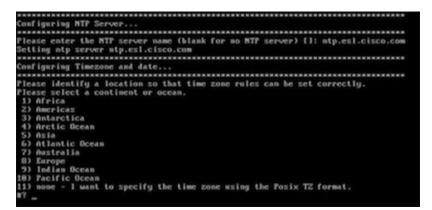
```
cmxctl stop
cmxctl stop ?a
!Go to root user
su
!Run the timezone script
/opt/cmx/bin/tzselect
!Logout of the box
exit
!Log back in and check the timezone
date
!Restart the services
cmxctl start agent
cmxctl start
```

Figure 23: Configuring NTP



Step 13 Configure the time zone and save the changes.

Figure 24: Configuring Time Zone



Step 14 Access the URL when prompted.

Figure 25: Access URL

I



Step 15 Open the URL http://<*ip-address*>:1984 when prompted in the browser. The Cisco Mobility Services Installation sign in page is displayed.

Figure 26: Welcome Menu

cisco 1020-248	
Ξ	
	Welcome to the Cisco Mobility Services Installation
	Username
	Password
	Sign in
	Please Login using your cmxadmin credentials
	© 2015 Clisco Systems, Inc.

Step 16 In the Cisco Mobility Services Installation sign in page, enter your cmxadmin credentials and proceed with the installation.
 Note Use steps 15-16 while installing a new MSE virtual appliance.

Creating New Virtual Machines Using Hyper-V Manager

You can now run Cisco CMX on Microsoft Hyper-V virtualization hosts. This enables you to use Cisco CMX on virtual machines using any Hyper-V capable host running Windows Server 2008 R2 or later.

You can create a new virtual machine using Hyper-V Manager application. Ensure to specify 24 GB of memory or higher when creating the virtual machine in Hyper-V manager, and to subsequently increase the processor count for the virtual machine to 8 vCPU or higher before starting the new virtual machine.

If you are running Windows Server 2012 or later, we recommend you to convert the Cisco CMX .vhd disk image to .vhdx format before adding it to the new virtual machine.

To create a new virtual machine:

- **Step 1** Download the CMX .vhd file to the location on the drive where it will reside.
- **Step 2** (Optional) Convert the .vhd file to .vhdx format.
- Step 3Open the Hyper-V Manager application and verify the Hyper-V virtual network switch configuration.NoteTo configure a Hyper-V virtual network switch, click Virtual Switch Manager at the right side of the Hyper-V
Manager window.

Step 4	To create a new VM, choose Action > New > Virtual Machine.
Step 5	Enter a name for the new virtual machine.
Step 6	Select to store the virtual machine in a different location, browse to the folder containing the .vhd or converted .vhdx file, and then click Next .
Step 7	Choose Generation 1 as the machine type, and then click Next. Note Only certain Windows guests support Generation 2.
Step 8	Specify 8192 or greater for the VM memory, and then click Next. Note Do not enable Dynamic Memory.
Step 9	Under Connections, choose the appropriate virtual network switch to connect the VM, and then click Next.
Step 10	Select Use an existing hard disk, and then navigate to the .vhd or .vhdx file on your hard disk.
Step 11	In the Summary window, click Finish.
Step 12	Edit the new VM settings and change the processor count to a minimum of 4.

Installing Cisco CMX Using Web Interface

Launch the Cisco CMX user interface using Google Chrome 40 or later, and follow these steps:

Step 1 In the Cisco CMX web interface, enter the login credentials for a Cisco CMX administrator and click **Sign in** to continue. The login username is **cmxadmin**. Use the password that was configured when the system was started for the first time.



I

cisco 10.2.0-248		
Ξ		
	Welcome to the Cisco Mobility Services Installation	
	Username	
	Password	
	Sign in	
	Please Login using your cmxadmin credentials	
	© 2015 Cisco Systems, Inc.	

Step 2 Choose the Cisco CMX type as either **Location** or **Presence**.

The installation is initiated and services are started. Note that this may take a few minutes.

0	Note Type	0	Services	3	Configuration	0	Strip	•	Frish
						Status	Console		
			If Cache_638 If Cache_638 If Contal If Contal If Cache_637 If Cache_637 If Cache_638 If Cache_638 If Cache_638	8	42%	O Influid Cassar Metrice Haprox Config Isdocs Locatio Matab Nimspit Nimspit	idra V Instition Institute		
			C	onfigu	ring Influxe	db			

The sequence of events is as follows:

- 1 Consul Configuration
- 2 DB Installation
- 3 Schema Migration
- 4 InfluxDB Configuration
- 5 Cassandra Installation
- 6 Node Registration
- **Step 3** Click **Please click to continue setup** or press **Enter** to proceed to the main portal.
 - **Note** You can monitor the progress of the installation either through the graphical status display or the console output. Note that this console is for display only.

Node Type	2	Services	3	Configuration	•	Startup	3	Finish
					St	atus Console		
		✓ Consul ✓ Confd			🛢 Cassand 🌣 Metrics	dra		
		Database Cache_6378			P Haproxy			
		Cache_6379			✓ lodocs			
		Cache_6380			Analytic Q Location			
		Cache_6382			Matlabe			
		Qlesspywork	er		A Nmsplb			
		🎒 Influxdb			Connection Q Hyperiod			
		-		80%				
		Ple	ase clic	k to continue	setup			
	6			obility Services U: some services ha				
	e			is using the CLI. [

The installation is complete. If this is a reinstallation, the **Cisco CMX Welcome** window is displayed. If this is a fresh installation, the user is automatically authenticated and the **Cisco CMX Welcome** is skipped.

Step 4 Log in with the username **admin** and password **admin**.

Figure 28: Welcome Screen

CISCO 10/2/0-beta/663		
V	Velcome to CMX	
a	dmin	
	Sign in	
	© 2015 Cisco Systems, Inc.	

What to Do Next

I

A **Setup Assistant** window is displayed, from where you can complete the initial configuration. You must now set a password for the admin user, import Cisco WLC details and maps from Cisco Prime Infrastructure, and configure and test mail server settings.

Use https://<ip address> for all subsequent logins to the web user interface. Use https:// <ip-address>:1984 only for initial configuration.

ultuttu cue cis	Q	@	08	*		A
SETUP ASSISTANT						
	Welcome t	o CMX				etrics
Sy Set New Password	Please proceed through		stant to get you	r system up and runni	ng.	**
Maps and Controllers						
Mail Server						
Done!						
L						-
Ci						+
					Cancel	Next
		_			Calica	
		Active	Inactive			

Figure 29: Setup Assistant

Upgrading from Cisco CMX 10.x to 10.4

There are three options to upgrade from Cisco CMX 10.x to Cisco CMX 10.4:

- Option 1—Copy the Cisco CMX image into the Cisco CMX node, and then use the **cmxos upgrade** <*cmx-file*> command from the command line to perform the upgrade.
- Option2—Use the web installer on port 1984, and choose **Remote File** to download the Cisco CMX image from a hosted site, for example, the Cisco CMX image may be available in an internal web server for download.
- Option 3—Use the web installer on port 1984, and choose Local File to upload the Cisco CMX image from your local machine through the web browser.



We recommend either option 1 or 2.

Upload of the Cisco CMX image might fail if you use option 3. This is due to a memory leak with a third-party library used in the installer. However, this library will be fixed in subsequent versions of the installer. If you chose option 3 and the upload fails, restart the installer program by using the **cmxos adminui stop** command and then the **cmxos adminui start** command. Option 3 might succeed after several tries.

I

Verifying Installing Cisco MSE in a VMware Virtual Machine

You can verify the overall system health and status of the Cisco MSE services using the **System** tab in the Cisco MSE user interface. Ensure that all the services, memory, and CPU indicate a healthy status (green) for each Cisco MSE and Cisco CMX node, and that there is at least one active Cisco WLC.

The System tab contains the following subtabs:

- Dashboard—Provides an overall view of the system.
- Alerts—Enables you to view live alerts.
- **Patterns**—Enables you detect patterns of various criteria, such as Client Count, CPU Usage, Memory Usage, and so on..
- Metrics—Enables you to view system metrics.

٦



Virtual Machine Setup and Administration

This chapter contains the following sections:

- Adding a Hard Disk to a Virtual Machine in the vSphere Client, page 33
- Configuring the Network, page 33
- Reconfiguring CPU and RAM for Cisco CMX installation, page 34

Adding a Hard Disk to a Virtual Machine in the vSphere Client

When you add a hard disk to a virtual machine (VM), you can create a new virtual disk, add an existing virtual disk, or add a mapped Storage Area Network (SAN) Logical Unit Number (LUN).

In most cases, you can accept the default device node. For a hard disk, a nondefault device node is useful to control the boot order or to have different Small Computer System Interface (SCSI) controller types. For example, you might want to boot from an LSI Logic controller and use a Buslogic controller with bus sharing turned on to share a data disk with another VM.

Configuring the Network

By default, the VM uses the host network settings. Hence, no configuration is required for VM adapters on ESXi. If you have both public and private networks connected to the host and want the VM to access both the networks, you must configure the VM adapters in the vSphere client.

Reconfiguring CPU and RAM for Cisco CMX installation

Before you run any commands to reconfigure the CPU and RAM, run the **cmxctl config** command to back up the current configuration. Ensure to make the Cisco CMX device offline before the reconfiguration.

- **Step 1** Run the **cmxctl stop -a** command to stop all the Cisco CMX services.
- **Step 2** Run the **shutdown -h now** command to shutdown the device.
- **Step 3** Navigate to VMWare manager.
- Step 4 Change the RAM and CPU as required.We recommend that you refer to the documentation for standard configurations. Random configurations may return unexpected results.
- **Step 5** Restart up the device.
- **Step 6** Run the **cmxctl status** command to verify if all the Cisco CMX services are running.
- **Step 7** (Optional) If the Cisco CMX services are not running, run the **cmxctl start** command to start the services.
- **Step 8** To reconfigure the RAM reserved for each service, run the **cmxctl config reload --resize=True** command. Running this command will prompt to restart the services. Use the **cmxctl start** command to restart the services.
- **Step 9** To verify the configuration, run the **cmxctl config get** command and compare the current and previous configuration.



Uploading the Cisco CMX/MSE ISO Image to the Cisco MSE 3365

Note

Make sure the Serial over Lan (SoL) functionality is enabled on the Cisco Unified Communication System (UCS). To enable SoL on the Cisco UCS server, use the **set enabled yes** command. For more information on enabling SoL, refer to the Cisco UCS documentation on Cisco.com.

- Uploading the Cisco CMX/MSE ISO Image to the Cisco MSE 3365 Using Newer CIMC Versions, page 35
- Uploading the Cisco CMX/MSE ISO Image to the Cisco MSE 3365 Using Older CIMC Versions, page 43

Uploading the Cisco CMX/MSE ISO Image to the Cisco MSE 3365 Using Newer CIMC Versions

MSE 3365 Software Reset is a process used to load the MSE 3365 with a required image (MSE 8.x, or CMX 10.x). The MSE 3365 is a UCS-based device, and can be accessed through the Cisco Integrated Management Controller (CIMC) interface.

Before You Begin

Java Version 1.6.0.14 must be installed on the client machine used to access your MSE 3365 device.

- Step 1 Download the Cisco MSE ISO image from the Download Software page on cisco.com.
- **Step 2** Open a browser, and enter the IP address of your device to log in to to the Cisco Integrated Management Controller (CIMC) GUI interface (Address format is https://x.x.x.x).



cisco Cisco Integra	ated Managemer	nt Controller			
Overall Server Status	c 😃 🛃 📕 0 0				
Moderate Fault	Server Summary				
Server Admin Storage	Actions	Server Properties	Server Properties		
Manani Storoje	Power On Server	Product Name:	UCS C240 M35		
Summary		Serial Number:	FCH1820V138		
Inventory	Power Off Server	PID:	UCSC-C240-M3S		
Sensors	Shut Down Server	UUID:	223FD022-0D4E-4A78-B583-34B3A928902D		
Remote Presence	C	BIOS Version:	C240M3.1.5.4f.0 (Build Date: 11/13/2013)		
BIOS	O Power Cycle Server	Description:			
Power Policies	Hard Reset Server				
Faults and Logs	Launch KVM Console	Server Status		7	
		Power State:			
	Turn On Locator LED	Overall Server Status:			
		Temperature:			
		Power Supplies:			
			Good		
		Locator LED:			
		Overall Storage Status:	N/A		
		Cisco Integrated Managem	ent Controller (CIMC) Information		
		Hostname:	C240-FCH1820V138		
		IP Address:	172.19.7.43		
		MAC Address:	50:87:89:87:82:28		
		Firmware Version:	1.5(4d)		
		Current Time (UTC):	Wed Sep 16 17:39:50 2015		

- **Step 3** Click Server and in the Server Summary page, click Launch KVM Console and click OK. A mini executable file is downloaded.
- **Step 4** Open the file using javaws.exe from the bin folder of your Java installation. If a security error prevents you from installing the file, add the URL of the CIMC to the list of exception sites, using the steps below.
 - a) Choose Control Panel > Programs > Java.
 - b) Choose Security > Edit Site List > Add and add the CIMC URL.
 - c) Click OK.

The installation is initiated.

Step 5

In the KVM Console window that is displayed after the installation, click the Virtual Media tab.

Figure 31: KVM Console

▲ 172.19.7.43 - KVM Console	_ — X
File View Macros Tools Help	
VMware ESXI 5.1.0 (VMKernel Release Build 1483097)	
Cisco Systems Inc UCSC-C240-M3S	
2 x Intel(R) Xeon(R) CPU E5-2697 v2 @ 2.70GHz 512 GiB Memory	
Download tools to manage this host from:	
http://172.19.7.42/ (STATIC) http://[fe88::5287:89ff:feb7:b22f]/ (STATIC)	
<f2> Customize System/View Logs</f2>	<f12> Shut Down/Restart</f12>

Step 6 In the Virtual Media window that is displayed, choose Activate Virtual Devices > Select "Map CD/DVD. Browse and select the downloaded MSE image.

Figure 32: ISO Image Selected

10.154.80.23 - KVM Console	
ile View Macros Tools Power Virtual Media Help	
Create Image	
✓ Activate Virtual Devices	
CISCO-MSE-L-K9-8-0-110-10-64bit-MSE-3365-onlyJiso Mapped to CD/DVD	
elcome to Red Hat E Map Removable Disk	
Map Floppy	
Post-Installation Running post-installation scripts	0.6 fps 0.002 KB/s 3

The recovery process begins. The Select Install Method window is displayed.

- **Step 7** In the Select Install Method window that is displayed, choose any of the following options:
 - Option 1: Install CMX using Serial—Respond to the prompt to press ENTER by starting an SSH session to the CIMC interface, as the KVM console does not permit you to press ENTER (With CSCuw32543). Use the following commands to initiate the SSH session:

ssh <cimc-ip-address>
connect host

You can see that the image is being copied from CDROM. The process can take up to forty-five minutes to copy.

Figure 33: Copying from CDROM

2 10.154.80.23 - PuTTY		
Board Product Name	: UCSC-C220-M4S	
Board Part Number	: 74-12419-01	
Board Serial	: FCH19437X8F	
FRU File ID	: C220	
Part Number Revision		
FAB Version		
VID		
Product Manufacturer	: Cisco Systems Inc	
Product Name	: AIR-MSE-3365-K9	
Product Part/Model Number	: 74-12502-01	
Product Version		
Product Serial	: FCH1944V269	
FRU File ID	: C220M4S	
Part Number Revision		
AID		
Success in setting for FR		
UDI PID update complete		
"Edit grub.conf"		
"Root drive is UUID=99a9f	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a5	19343c″
Check tmpfs partition bef	pre installation	
tmpfs 32G) 32G Ok/dev/shm	
Set host name with hostna	ne command	
Restarting network service	es after setting hostname	
The hostname is: mse-3365		
Add dummy address in /etc.	/hosts file	
Check /etc/hosts file		
127.0.0.1 localhost loca	alhost.localdomain localhost4 localhost4.localdomain4	
::1 localhost loc	alhost.localdomain localhost6 localhost6.localdomain6	
192.168.253.1 mse-3365 1	nse-3365.cisco.com	
Copying CISCO-MSE-L-K9-8-	D-110-10-64bit.bin.tar.gz from the CDROM. Thu Jan 7 13:51:34 PST 20	016
		-

Figure 34: Copying Database Files from CDROM

I

1

loard Serial	: FCH19437X8F
art Number Revision	
/ID	
roduct Manufacturer	
	: AIR-MSE-3365-K9
Product Part/Model Number	: 74-12502-01
Product Version	
Product Serial	
RU File ID	
Part Number Revision	
/ID	
Success in setting for FR	U ID 2
JDI PID update complete 'Edit grub.conf"	
- JDI PID update complete "Edit grub.conf" 'Root drive is UUID-99a9f	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c″
JDI PID update complete Edit grub.conf" Root drive is UUD-99a9f Theck tmpfs partition bef	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c″
JDI PID update complete Edit grub.conf" Root drive is UUD-99a9f Theck tmpfs partition bef	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c″ ore installation 0 32G 0% /dev/shm
JDI FID update complete "Edit grub.conf" "Root drive is UUID=99a9f Theck tmpfs partition bef mpfs 320 Set host name with hostna	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c″ ore installation 0 32G 0% /dev/shm
IDI FID update complete Edit grub.conf" Root drive is UUID=99a9f Theck tmpfs partition bef mpfs 326 Set host name with hostnam Restarting network servic The hostname is: ms=3365	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c" ore installation 0 32G 0% /dev/shm me command es after setting hostname .cisco.com
JDI PID update complete "Edit grub.conf" Noot drive is UUID-99a9f Theck tmpfs partition bef smpfs 32G Set host name with hostna Restarting network servic	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c" ore installation 0 32G 0% /dev/shm me command es after setting hostname .cisco.com
JDI FID update complete "Edit grub.conf" Noot drive is UUID-99a9f theck tmpfs partition bef sompfs 326 Set host name with hostname Restarting network service The hostname is: mse-3365 kdd dummy address in /etc. Theck /etc/hosts file	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c″ ore installation 0 326 0% /dev/shm me command es after setting hostname .cisco.com /hosts file
IDI FID update complete Edit grub.conf" Root drive is UUID=99a9f Theck tmpfs partition bef impfs 326 Set host name with hostnam Restarting network service The hostname is: mse-3365 kidd dummy address in /etc. Theck /etc/hosts file 127.0.0.1 localhost loc	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c" ore installation 0 32G 0% /dev/shm me command es after setting hostname .cisco.com /hosts file alhost.localdomain localhost4 localhost4.localdomain4
IDI FID update complete "Edit grub.conf" "Root drive is UUID=99a9f Theck tmpfs partition bef mpfs 326 Bet host name with hostnaw Restarting network servic The hostname is: mse-3365 Add dummy address in /etc. theck /etc/hosts file 127.0.0.1 localhost loc :1 localhost loc	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c" ore installation 0 32G 0% /dev/shm me command es after setting hostname .cisco.com /hosts file albost.localdomain localhost4 localhost4.localdomain4 albost.localdomain localhost6 localhost6.localdomain6
JDI FID update complete "Edit grub.conf" Noot drive is UUID=99a9f theck tmpfs partition bef mmpfs 326 Bet host name with hostname Restarting network service The hostname is: mse-3365 tid dummy address in /etc Theck /etc/hosts file 127.0.0.1 localhost loc 192.168.253.1 mse-3365 Joc 192.168.253.1 mse-3365	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c" ore installation 0 32G 0% /dev/shm me command es after setting hostname .cisco.com /hosts file alhost.localdomain localhost4 localhost4.localdomain4 alhost.localdomain localhost6 localhost6.localdomain6 me=-3365.cisco.com
JDI FID update complete "Edit grub.conf" Noot drive is UUID=99a9f theck tmpfs partition bef mmpfs 326 Bet host name with hostname Restarting network service The hostname is: mse-3365 tid dummy address in /etc Theck /etc/hosts file 127.0.0.1 localhost loc 192.168.253.1 mse-3365 Joc 192.168.253.1 mse-3365	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c" ore installation 0 32G 0% /dev/shm me command es after setting hostname .cisco.com /hosts file albost.localdomain localhost4 localhost4.localdomain4 albost.localdomain localhost6 localhost6.localdomain6
IDI FID update complete "Edit grub.conf" "Root drive is UUID=99a9f Theck tmpfs partition bef impfs 326 Bet host name with hostname Restarting network servic The host name is: ms=3365 Mdd dummy address in /etc. Theck /etc/hosts file 127.0.0.1 localhost loc 127.168.253.1 mse=3365 Copying CISCO-MSE-L-K9-8-1	e4b-bdc1-4a8a-b1ab-a449a519343c UUID=99a9fe4b-bdc1-4a8a-b1ab-a449a519343c" ore installation 0 32G 0% /dev/shm me command es after setting hostname .cisco.com /hosts file alhost.localdomain localhost4 localhost4.localdomain4 alhost.localdomain localhost6 localhost6.localdomain6 me=-3365.cisco.com

• Option 2: Install CMX using current console—The recovery process is initiated using the current console.

Step 8 Once the image is copied, a silent installation is initiated.

Figure 35: Preparing SILENT Mode Installation

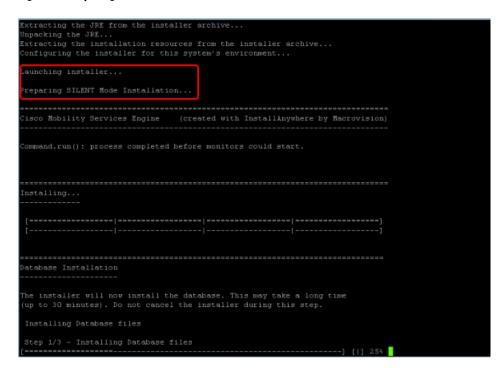
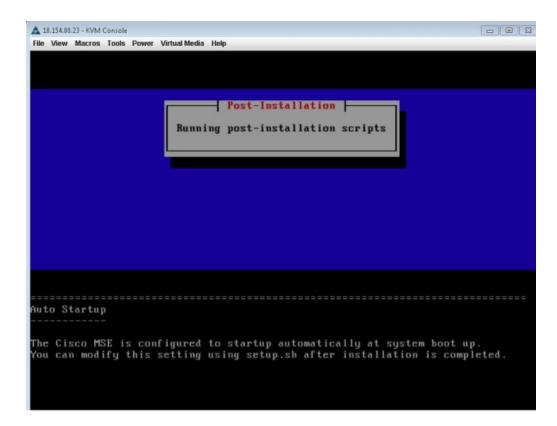


Figure 36: Running Post-Installation Scripts



Step 9 The device boots up with the newly loaded image. The CD/DVD mapping is automatically unchecked. In case it is checked, uncheck the **Activate Virtual Devices** option, so that the BIOS setting is checked for the image copied on the HDD every time it reboots.

Figure 37: Map CD/DVD

I

A 10.154.80.23 - KVM Console	
File View Macros Tools Power Virtual Media Help	
Create Image	
✓ Activate Virtual Devices	
Welcome to Red Hat E Map Removable Disk JUP x86_64	
Welcome to Ked Hat E Map Removable Disk For X86_64 Map Floppy	
wap rioppy	
10.154.80.23	admin 0.4 fps 0.001 KB/s 角 🕤

Uploading the Cisco CMX/MSE ISO Image to the Cisco MSE 3365 Using Older CIMC Versions

MSE 3365 Software Reset is a process used to load the MSE 3365 with a required image (MSE 8.x, or CMX 10.x). The MSE 3365 is a UCS-based device, and can be accessed through the Cisco Integrated Management Controller (CIMC) interface.

Before You Begin

Java Version 1.6.0.14 must be installed on the client machine used to access your MSE 3365 device.

- **Step 1** Download the Cisco MSE ISO image from the Download Software page on cisco.com.
- **Step 2** Open a browser, and enter the IP address of your device to log in to to the Cisco Integrated Management Controller (CIMC) GUI interface (Address format is https://x.x.x.x).



cisco Cisco Integra	ated Manageme	nt Controller			
Overall Server Status	c 😃 🛃 0 0				
A Moderate Fault	Server Summary				
Server Admin Storage	Actions	Server Properties			
Server Admin Storage	1	Product Name:	UCS C240 M35		
Summary	Power On Server	Serial Number:	FCH1820V138		
Inventory	Power Off Server	PID:	UCSC-C240-M3S		
Sensors	Shut Down Server	UUID:	223FD022-0D4E-4A78-B583-34B3A928902D		
Remote Presence		BIOS Version:	C240M3.1.5.4f.0 (Build Date: 11/13/2013)		
BIOS	O Power Cycle Server	Description:			
Power Policies	Mard Reset Server				
Faults and Logs	Launch KVM Console	Server Status			
		Power State:		1 1 mar 1 mar 1 m	
	O Turn On Locator LED	Overall Server Status:			
		Temperature:			
		Power Supplies:			
			Good		
		Locator LED:			
		Overall Storage Status:	N/A		
		Cisco Integrated Managem	ent Controller (CIMC) Information		
		Hostname:	C240-FCH1820V138		
		IP Address:	172.19.7.43		
		MAC Address:	50:87:89:87:82:28		
		Firmware Version:	1.5(4d)		
		Current Time (UTC):	Wed Sep 16 17:39:50 2015		

- **Step 3** Click Server and in the Server Summary page, click Launch KVM Console and click OK. A mini executable file is downloaded.
- **Step 4** Open the file using javaws.exe from the bin folder of your Java installation. If a security error prevents you from installing the file, add the URL of the CIMC to the list of exception sites, using the steps below.
 - a) Choose Control Panel > Programs > Java.
 - b) Choose Security > Edit Site List > Add and add the CIMC URL.
 - c) Click OK.

The installation is initiated.

Step 5

i In the KVM Console window that is displayed after the installation, click the Virtual Media tab.

Figure 39: KVM Console

▲ 172.19.7.43 - KVM Console	- D X
File View Macros Tools Help	
S KVM S VIRtuar Media	
VMware ESXi 5.1.0 (VMKernel Release Build 1483897)	
Cisco Systems Inc UCSC-C240-M3S	
2 x Intel(R) Xeon(R) CPU E5-2697 v2 @ 2.70GHz	
512 GTB Menory	
Download tools to manage this host from: http://172.19.7.42/ (STATIC)	
http://ffe88::5287:89ff:feb7:b22f1/ (STATIC)	
<p2> Custonize System/View Logs</p2>	<f12> Shut Down/Restart</f12>

Step 6 In the Virtual Media window that is displayed, click Add Image.

Figure 40: Virutal Media

1

112.1.5.1.15	- KVM Console			and the second second	
ile Help					
S KVM S Virt	ual Media				
Client View Mapped R	tead Only Drive				
mapped	out only onle				Exit
					Create Image
					Add Image
					Remove Image
					Details *
Details Target Drive Virtual CD/DVD Removable Disk	Mapped To Not mapped Not mapped	Read Bytes Write Bytes	Duration		USB Reset
Floppy	Not mapped				

Step 7 Browse and select the downloaded MSE image and click **Open**.

Figure 41: Select Downloaded Cisco MSE ISO Image

A 172.19.7.43 - KVM Console		_ – ×
File Help		
🚽 KVM 🚽 Virtual Media		
Client View		
Mapped Read Only Drive		Exit
		Create Image
		Add Image
G	Open	Remove Image
	🛓 Open	Details #
Details Target Drive Mapped To Virtual CDIDVD Hot mapped Removable Disk Not mapped Floppy Not mapped	Look Jn: Documents	USB Reset

The recovery process begins.

Step 8 During the recovery process, respond to the prompt to press ENTER by starting an SSH session to the CIMC interface, as the KVM console does not permit you to press ENTER (With CSCuw32543). Use the following commands to initiate the SSH session:

ssh <cimc-ip-address>
connect host

I

The device boots up with the newly loaded image.